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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/854,461	05/15/2001	Miska Hannuksela	367.40127X00	8072
20457	7590	12/16/2004	EXAMINER	
ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-9889			LEE, RICHARD J	
			ART UNIT	PAPER NUMBER
			2613	

DATE MAILED: 12/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/854,461

Applicant(s)

HANNUKSELA ET AL.

Examiner

Richard Lee

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/15/01, 1/28/02</u> . | 6) <input type="checkbox"/> Other: ____ |

Art Unit: 2613

1. Claims 6, 7, 9, and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For examples:

(1) claim 6, lines 3-4, "the Supplemental Enhancement Information" shows no clear antecedent basis;

(2) claim 7, line 2, "the comparison" shows no clear antecedent basis;

(3) claim 9, line 2, after "encoded", "video" should be properly inserted in order to provide proper antecedent basis for the same as specified at line 1;

(4) claim 12, line 2, the particular claimed to "and a video" is vague and indefinite in that it is unclear what is being claimed;

(5) claim 12, line 17, after "encoded", "video" should be properly inserted in order to provide proper antecedent basis for the same as specified at line 16;

(6) claim 12, line 19, before "current", "a" should be changed to "the" in order to provide proper antecedent basis for the same as specified at line 6;

(7) claim 12, line 19, before "default", "a" should be changed to "the" in order to provide proper antecedent basis for the same as specified at lines 8-9; and

(8) claim 12, line 21, before "encoded", "an" should be changed to "the" in order to provide proper antecedent basis for the same as specified at line 16.

Art Unit: 2613

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 7, 8, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Lynch (5,198,901).

Lynch discloses a derivation and use of motion vectors in a differential pulse code modulation system as shown in Figure 1-4, 14-16, 18, and 19, and the same method of encoding a video signal representing a sequence of pictures and video encoder (see Figure 14) as claimed in claims 1-3, 7, 8, and 10, comprising the same receiving a current picture for encoding (i.e., input video signals 1 to video encoder of Figure 14), forming a temporal prediction of at least part of the current picture from a default reference picture for the current picture (i.e., current frame B4 of Figure 2 is temporally predicted from default reference picture P3, see column 1, line 43 to column 2, line 20), comparing the part of the default reference picture or current picture with a corresponding part of at least one further reference picture of the sequence to form a measure of similarity (i.e., default reference picture P3 of Figure 2 is compared with one further reference picture I0, and a measure of similarity is calculated when searching for the matching block, see column 1, line 43 to column 2, line 20), calculating a measure of the similarity between the default reference picture and each further reference picture (i.e., a measure of similarity between the default reference picture P3 of Figure 2 and each further reference picture I0, B1, and B2, is calculated in the process of determining the best matching block, see column 1, line 43 to column 2, line 20), if the measure of similarity meets a pre-determined

Art Unit: 2613

criterion, outputting an indicator identifying the further reference picture (i.e., the motion vectors mv13, mv23, mv30 represents the respective indicators identifying the respective further reference pictures, see column 1, line 43 to column 2, line 20), forming a temporal prediction of the current picture from a first default reference picture and a second default reference picture for the current picture (i.e., P3 of Figure 2 is considered the first default reference picture and P6 is considered the second default reference picture for the current picture B4, see column 1, line 43 to column 2, line 20), first default reference picture occurring temporally before the current picture and the second default reference picture occurring temporally after the current picture (see temporal frames P3, B4, P6 of Figure 2), comparing the first default reference picture with at least one further reference picture occurring temporally before the current picture (i.e., first default reference picture P3 of Figure 2 is compared with reference picture I0 occurring temporally before the current picture B4, see column 1, line 43 to column 2, line 20), calculating a measure of the similarity between the first default reference picture and each further reference picture (i.e., the calculating of the measure of similarity is done when searching for the matching block, see column 1, line 43 to column 2, line 20) and, if the measure of similarity meets a predetermined criterion, outputting an indicator identifying the further reference picture (i.e., motion vector mv30 is considered the indicator identifying the further reference picture, see column 1, line 43 to column 2, line 20), comparing the default reference picture with a plurality of further reference pictures, wherein the comparison is carried out for portions of a picture at a time (i.e., default reference picture P3 of Figure 2 is compared with reference pictures I0, B1, and B2, see column 1, line 43 to column 2, line 20) and outputting an indicator for each further reference picture that meets the predetermined criterion (i.e., mv13, mv23, mv30 represents the respective

Art Unit: 2613

indicators identifying the respective further reference pictures, see column 1, line 43 to column 2, line 20), an input (i.e., 1-3 of Figure 14) for receiving a video signal representing a sequence of pictures, an input for receiving a current picture for encoding (i.e., 4, 5 of Figure 14), a predictive coder (i.e., 17, 68 of Figure 14, and see Figure 2) for forming a temporal prediction of the current picture from a default reference picture for the current picture, a comparator for comparing the default reference picture or the current picture with at least one further reference picture and calculating a measure of the similarity (i.e., P3 of Figure 2 represents the default reference picture, with P3 being compared with one further reference picture I0, and the calculating of the measure of similarity is done when searching for the matching block, see column 1, line 43 to column 2, line 20), and outputting an indicator identifying the further reference picture (i.e., mv30 represents the indicator identifying the further reference picture, see column 1, line 43 to column 2, line 20).

4. Claims 9 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Sun et al (5,455,629).

Sun et al discloses an apparatus for concealing errors in a digital video processing system as shown in Figure 1-4, 6, and 7, and the same method of decoding an encoded video signal representing a sequence of pictures and video decoder (see decoders of Figures 6 and 7) as claimed in claims 9 and 11, the encoded signal including pictures that have been encoded by forming a temporal prediction of a current picture from a default reference picture for the current picture (see columns 1-2, and columns 7-10), receiving an encoded video signal representing a current picture and decoding at least the picture header of the current picture (see column 2, line 33 to column 3, line 4, column 8, line 65 to column 9, line 32) wherein, when the decoder is

Art Unit: 2613

unable to decode the default reference picture of the current picture, examining an indicator identifying a further reference picture and decoding the current picture with reference to said further reference picture if such an indicator is associated with the current picture (i.e. generator 65 within decoder of Figure 6 provides the indicator associated with the current picture for identifying a substitute macroblock (further reference picture) in the event the decoder is unable to decode the lost macroblock data (default reference picture), see column 8, line 33 to column 9, line 8), an input (see Figure 6) for receiving an encoded video signal representing a sequence of pictures, the encoded signal including pictures that have been encoded by forming a temporal prediction of a current picture from a default reference picture for the current picture (see columns 1-3), and the decoder comprising an input for receiving an encoded video signal representing a current picture (see Figures 6 and 7) and a processor for decoding at least the picture header of the current picture (see column 2, line 33 to column 3, line 4, column 8, line 65 to column 9, line 32).

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5 and 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch as applied to claims 1-3, 7, 8, and 10 in the above paragraph (3), and further in view of Sun et al (5,455,629).

Lynch discloses substantially the same the same method of encoding a video signal representing a sequence of pictures and video encoder as above, but does not particularly

Art Unit: 2613

disclose wherein the indicator is included in a picture header as claimed in claims 5 and 13. The particular use of picture headers for including indicators are however old and well recognized in the art, as exemplified by Sun et al (see column 2, line 33 to column 3, line 4, column 8, line 65 to column 9, line 32). Therefore, it would have been obvious to one of ordinary skill in the art, having the Lynch and Sun et al in front of him/her and the general knowledge of picture header data, would have had no difficulty in providing the picture header formatting including the indicator as taught by Sun et al for the video encoder of Lynch for the same well known compliance with the MPEG protocol and so that the receiving decoder may properly decode the video data purposes as claimed.

7. Claims 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch and Sun et al as applied to claims 1-3, 5, 7, 8, 10, and 13 in the above paragraphs (3) and (6), and further in view of Yamaguchi et al (US 2002/0009141 A1).

The combination of Lynch and Sun et al discloses substantially the same the same method of encoding a video signal representing a sequence of pictures and video encoder, and method of decoding an encoded video signal representing a sequence of pictures and video decoder as above, further including the decoder comprising an input for receiving an encoded video signal representing a sequence of pictures (see Figures 6 and 7 of Sun et al), the encoded signal including pictures that have been encoded by forming a temporal prediction of a current picture from a default reference picture for the current picture (see columns 1-2, and columns 7-10 of Sun et al), the decoder comprising an input for receiving an encoded video signal representing a current picture (see Figures 6 and 7 of Sun et al), wherein, when the decoder is unable to decode the default reference picture of the current picture, the decoder is arranged to

Art Unit: 2613

examine an indicator identifying a further reference picture and to decode the current picture with reference to the further reference picture if such an indicator is associated with the current picture (i.e. generator 65 within decoder of Figure 6 of Sun et al provides the indicator associated with the current picture for identifying a substitute macroblock (further reference picture) in the event the decoder is unable to decode the lost macroblock data (default reference picture), see column 8, line 33 to column 9, line 8).

The combination of Lynch and Sun et al does not particularly disclose, though a radio telecommunications device as claimed in claim 12. The particular use of radio telecommunications as the specific means for transmitting compressed video is however old and well recognized in the art, as exemplified by Yamaguchi et al (see Figure 15A, page 19, sections [0289], [0291], [0293], [0294]). Therefore, it would have been obvious to one of ordinary skill in the art, having the Lynch, Sun et al, and Yamaguchi et al in front of him/her and the general knowledge of radio communications, would have had no difficulty in providing the radio communication means of Yamaguchi et al as the specific means for transmitting the video data from the transmitter 14 of Lynch to the video decoder as shown in Figure 17 of Lynch for the same well known transmission of video for decoding and viewing purposes as claimed.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch as applied to claims 1-3, 7, 8, and 10 in the above paragraph (3), and further in view of ITU-Telecommunications Standardization Sector (Proposed Draft of modified Annex L including Copyright, normative Error Concealment, and Exact IDCT Signaling) of record.

Lynch discloses substantially the same the same method of encoding a video signal representing a sequence of pictures and video encoder as above, but does not particularly

Art Unit: 2613

disclose wherein the video signal is encoded according to the H.263 video compression standard and the indicator is included in the Supplemental Enhancement Information. Such technical features are however well known and made obvious by ITU- Telecommunications Standardization Sector (see version 3 extensions, pages 1-5). Therefore, it would have been obvious to one of ordinary skill in the art, having the Lynch and the ITU- Telecommunications Standardization Sector references in front of him/her and the general knowledge of video compression standards and recommendations, would have had no difficulty in providing the H.263 recommendation with Supplemental Enhancement Information as taught by the ITU- Telecommunications Standardization Sector reference for the video coder of Lynch so that the video signal encoded by Lynch may be encoding according to the H.263 recommendation and the indicator of Lynch may be included in the Supplemental Enhancement Information for the same well known compliance with the MPEG standard purposes as claimed.

9. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hurst, Kikuchi et al, and Hoshi et al disclose various types of motion video coders.

Art Unit: 2613

11. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:


(703) 872-9314, (for formal communications intended for entry)

(for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Lee whose telephone number is (703) 308-6612. The Examiner can normally be reached on Monday to Friday from 8:00 a.m. to 5:30 p.m., with alternate Fridays off.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group customer service whose telephone number is (703) 306-0377.


RICHARD LEE
PRIMARY EXAMINER

Richard Lee/rl 

12/10/04